

SECTION I: AMENDMENTS TO THE CLAIMS

Please amend claims 1-11, 13, 15, 16, 18, 21-24, and 27, and cancel claims 19 and 28, as set forth in the following complete listing of the claims of the application.

1. (Currently amended) A display device (~~101~~) for displaying a three dimensional image such that different views are displayed according to the different viewing angles ~~angle~~, the display device including:

a display panel (~~15, 53~~) having a plurality of separately addressable pixels (~~0...10~~) for displaying said image, the pixels being grouped such that different pixels in a group (~~16~~) correspond to different views of the image;

a display driver (~~52~~) for controlling an optical characteristic of each pixel to generate a grey scale image according to received image data; and

a grey scale compensation device (~~60, 70~~) for further controlling ~~said optical characteristic~~ light transmission characteristics of at least some pixels within a group to compensate for a predetermined viewing angle dependency of said optical characteristic.

2. (Currently amended) The display device of claim 1 further including a back panel (~~11~~) for providing a plurality of discrete sources (~~14~~) of illumination, each group (~~16~~) of pixels in the display panel (~~15~~) being positioned to receive light from a respective one of the discrete sources of illumination.

3. (Currently amended) The display device of claim 2 in which the back panel (~~11~~) provides a plurality of line sources of illumination.

4. (Currently amended) The display device of claim 2 in which the back panel (~~11~~) provides a plurality of point sources of illumination.

5. (Currently amended) The display device of claim 2 in which the display panel (~~15~~) is a light-transmissive display panel adapted for viewing from a side opposite to the a side on which the back panel (~~11~~) is located.

6. (Currently amended) The display device of claim 1 further including a lenticular array ~~(420)~~ positioned adjacent to the display panel ~~(415)~~, each lenticle ~~(421, 422)~~ within the lenticular array focusing light from selected pixels in the display panel.
7. (Currently amended) The display device of claim 6 in which each lenticle ~~(421, 422)~~ within the lenticular array ~~(420)~~ is associated with a ~~said~~ group ~~(46)~~ of pixels.
8. (Currently amended) The display device of claim 1 in which the ~~optical characteristic is a light transmission characteristic and the~~ display driver ~~(52)~~ and grey scale compensation device ~~(60, 70)~~ in combination are adapted to control the amount of light passing through each pixel according to a grey scale image to be displayed.
9. (Currently amended) The display device of claim 1 in which the grey scale compensation device ~~(60)~~ comprises a look-up table containing correction values to be applied in respect of each pixel within a group.
10. (Currently amended) The display device of claim 8 in which the correction values are selected according to ~~the~~ a viewing angle of a respective pixel within ~~the~~ a group ~~(46)~~.
11. (Currently amended) The display device of claim 10 in which the correction values are selected so as to substantially normalise a grey scale intensity displayed by a group of pixels to be independent of ~~the~~ viewing angle.
12. (Original) The display device of claim 9 in which the look-up table includes substitution values or offset values as a function of viewing angle to be applied to a frame store.
13. (Currently amended) The display device of claim 1 ~~[[8]]~~ in which the grey scale compensation device comprises a transmission versus voltage characteristic, and the grey scale compensation device is adapted to adjust a pixel drive voltage and/or current received from the display driver.

14. (Original) The display device of claim 13 in which the grey scale compensation device provides a voltage and/or current offset to the pixel drive voltage and/or current received from the display driver.

15. (Currently amended) The display device of claim 1 in which ~~the~~ inherent optical characteristics of the display panel ~~(15, 53)~~ are configured such that viewing angle dependence is reduced or substantially minimised relative to the y-axis and the grey scale compensation device ~~(60, 70)~~ serves to reduce or substantially minimise viewing angle dependence relative to an axis that is transverse to the y-axis.

16. (Currently amended) The display device of claim 15 in which the grey scale compensation device ~~(60, 70)~~ serves to reduce or substantially minimise viewing angle dependence relative to an axis that is orthogonal to the y-axis (i.e. the x-axis).

17. (Original) The display device of claim 16 incorporated into an object, in which the x-axis is defined as the horizontal axis when the object is in normal use, and the y-axis is defined as the vertical axis when the object is in normal use.

18. (Currently amended) A method for displaying a three dimensional image on a display device such that different views of the image are displayed according to ~~the different~~ viewing angles ~~angle~~, the method comprising the steps of:

processing image data to form grey scale pixel data values for each one of a plurality of separately addressable pixels ~~(0...10)~~ in a display panel ~~(15, 53)~~, the pixels being grouped such that different pixels in a group ~~(16)~~ correspond to different views of the image, the pixel data values each for controlling an ~~optical characteristic~~ light transmission characteristics of a respective pixel to generate a grey scale image;

applying grey scale correction values to at least some pixel data values within each group to compensate for a predetermined viewing angle dependency of the optical characteristic, by controlling an amount passing through each pixel according to a three dimensional grey scale image to be displayed; and

using the corrected pixel data values to drive pixels of a display panel to generate said image.

19. (Cancelled).
20. (Original) The method of claim 18 in which the grey scale correction values are obtained from a look-up table containing correction values to be applied in respect of each pixel within a group.
21. (Currently amended) The method of claim 20 ~~[[19]]~~ in which the grey scale correction values are selected according to ~~[[the]]~~ a viewing angle of a respective pixel within ~~[[the]]~~ a group ~~(+6)~~.
22. (Currently amended) The method of claim 21 in which the grey scale correction values are selected so as to substantially normalise a grey scale displayed by a group of pixels to be independent of the viewing angle.
23. (Currently amended) The method of claim 18 ~~[[19]]~~ in which the grey scale correction values are derived from a transmission versus voltage characteristic of the display panel, the corrected pixel data values being used to adjust a pixel drive voltage and/or current applied to the display panel.
24. (Currently amended) The method of claim 18 further including the step of configuring ~~the~~ inherent optical characteristics of the display panel ~~(+5, -3)~~ such that viewing angle dependence is reduced or substantially minimised relative to the y-axis and applying said grey scale correction values so as to reduce or substantially minimise viewing angle dependence relative to an axis that is transverse to the y-axis.
25. (Original) The method of claim 24 in which the grey scale correction values are applied to reduce or substantially minimise viewing angle dependence relative to an axis that is orthogonal to the y-axis (i.e. the x-axis).
26. (Original) The method of claim 25 in which the x-axis is the horizontal axis when the display panel is in normal use, and the y-axis is the vertical axis when the display panel is in normal use.

27. (Currently amended) A computer program product, comprising a ~~computer-readable~~ storage medium having thereon computer program code ~~means~~ adapted, when said computer program code is loaded onto a computer, to make the computer execute the ~~procedure~~ method of claim 18.

28. (Cancelled).